

Patent Claims

1. Measuring device (1) for the conditioning, output and forwarding of sensor signals in the context of a liquid and/or gas analysis, wherein the measuring device (1) includes a housing (14) of an electrically conductive material, in a wall of the housing (14) at least one cable gland (17, 18) for a shielded sensor signal line (20) for the transmission of the sensor signals, and an electrically conductive connection between a shielding (21) of the sensor signal line (20) and the housing (14), characterized in that the, or each, cable gland (17, 18) has regions of an electrically conductive material and means (32) for the electrical contacting of the regions both with the shielding (21) of the sensor signal line (20) and with the housing (14) and the regions serve for creating an electrically conductive connection between the shielding (21) of the sensor signal line (20) and the housing (14).
2. Measuring device (1) as claimed in claim 1, characterized in that the body (30, 31, 32, 34) of the, or each, cable gland (17, 18) comprises an electrically conductive material.
3. Measuring device (1) as claimed in claim 1 or 2, characterized in that the measuring device (1) includes a computing unit (2), especially a microprocessor, for processing the sensor signals and at least one sensor circuit (15, 16) arranged between the computing unit (2) and the sensor signal line (20) for the preprocessing of the sensor signals, wherein the, or each, sensor circuit (15, 16) is galvanically decoupled from the remainder of the measuring device (1).
4. Measuring device (1) as claimed in claim 3, characterized in that the measuring device (1) has optocouplers (40) for the galvanic decoupling of the, or each, sensor circuit (15, 16) from the remainder of the measuring device (1).
5. Measuring device (1) as claimed in one of the claims 1 to 4, characterized in that at least one power supply circuit (10) is provided for the supply of the, or each, sensor circuit (15) with energy, wherein the power supply circuit (10) has means for decoupling the measuring device (1) from the power supply (9).
6. Measuring device (1) as claimed in claim 5, characterized in that the means for decoupling are in the form of at least one transformer.
7. Measuring device (1) as claimed in one of the claims 1 to 6, characterized in that the measuring device (1) has at least two analog outputs (12), wherein the analog outputs (12) are galvanically decoupled from one another.